

IN THE CLAIMS

Claims 1-2 (canceled)

Claim 3 (currently amended): A The method of claim 2, wherein for manufacturing a semiconductor component, comprising:

providing a semiconductor substrate having a major surface;
forming a dielectric material over the major surface;
forming an opening in the dielectric material, the opening having sidewalls;
lining the opening with a barrier layer; and
forming a the multi-metal seed layer further includes on the barrier layer by:
forming a first metal oxide layer on the barrier layer;
forming a second metal oxide layer on the first metal oxide layer; and
reducing the first and second metal oxide layers.

Claim 4 (original): The method of claim 3, wherein reducing the first and second metal oxide layers includes heating the first and second metal oxide layers to a temperature of at least 150 degrees Celsius.

Claim 5 (currently amended): A The method of claim 2, wherein for manufacturing a semiconductor component, comprising:

providing a semiconductor substrate having a major surface;
forming a dielectric material over the major surface;
forming an opening in the dielectric material, the opening having sidewalls;
lining the opening with a barrier layer; and
forming a multi-metal seed layer on the barrier layer by:
forming a the first metal oxide layer on the barrier layer includes using atomic layer deposition to form the first metal oxide layer; and
forming a second metal oxide layer on the first metal oxide layer.

Claim 6 (original): The method of claim 5, wherein forming the second metal oxide layer includes using atomic layer deposition to form the second metal oxide layer.

Claim 7 (currently amended): The method of claim 3 2, wherein forming the first metal oxide layer includes using a metal oxide selected from the group of metal oxides consisting of copper oxide, tin oxide, silver oxide, and zinc oxide.

Claim 8 (currently amended): The method of claim 3 2, wherein forming the second metal oxide layer includes using a metal oxide selected from the group of metal oxides consisting of copper oxide, tin oxide, silver oxide, and zinc oxide.

Claim 9 (currently amended): A The method of claim 2, wherein for manufacturing a semiconductor component, comprising:
 providing a semiconductor substrate having a major surface;
 forming a dielectric material over the major surface;
 forming an opening in the dielectric material, the opening having sidewalls;
 lining the opening with a barrier layer; and
 forming a the multi-metal seed layer further comprises on the barrier layer by:
 forming a first metal oxide layer on the barrier layer;
 forming a second metal oxide layer on the first metal oxide layer;
 forming a third metal oxide layer on the second metal oxide layer; and
 reducing the first and second metal oxide layers.

Claim 10 (previously presented): The method of claim 9, wherein the first metal oxide layer comprises copper oxide, the second metal oxide layer comprises tin oxide layer, and the third metal oxide layer comprises copper oxide.

Claim 11 (currently amended): The method of claim 3 4, further including forming a layer of copper on the multi-metal seed layer.

Claim 12 (currently amended): A The method of claim 1, wherein for manufacturing a semiconductor component, comprising:

providing a semiconductor substrate having a major surface;

forming a dielectric material over the major surface;

forming an opening in the dielectric material, the opening having sidewalls;

lining the opening with a barrier layer; and

forming ~~a~~ the multi-metal seed layer on the barrier layer using a metal selected from the group of metals consisting of copper, tin, silver, and zinc.

Claim 13 (currently amended): The method of claim 3 ~~1~~, wherein forming the multi-metal seed layer includes forming the multi-metal seed layer to have a thickness of less than approximately 300 Angstroms.

Claims 14-26 (canceled)

Claim 27 (new): The method of claim 3, wherein the first metal oxide layer comprises copper oxide, the second metal oxide layer comprises tin oxide layer, and the third metal oxide layer comprises copper oxide.

Claim 28 (new): The method of claim 3, wherein forming the second metal oxide layer includes using atomic layer deposition to form the second metal oxide layer.

Claim 29 (new): The method of claim 5, wherein forming the first metal oxide layer includes using a metal oxide selected from the group of metal oxides consisting of copper oxide, tin oxide, silver oxide, and zinc oxide.

Claim 30 (new): The method of claim 5, wherein forming the second metal oxide layer includes using a metal oxide selected from the group of metal oxides consisting of copper oxide, tin oxide, silver oxide, and zinc oxide.